Arizona Department of Health Services

Bureau of State Laboratory Services
Office of Laboratory Licensure, Certification & Training

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JANE DEE HULL, GOVERNOR
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DATE:	April 28, 1995
TO:	Laboratory Director and QA Manager
FROM:	Wesley B. Press, Bureau Chief
SUBJECT:	Information Update #10
NOTE:	If any problems occur with this web site, please call (602) 364-0720. Thank you.

1. Q. Is it acceptable to preconcentrate the wastewater samples by EPA 200.7?

   A. Our Office in conjunction with Ted Martin, Research Chemist, USEPA/EMSL, Cincinnati, Ohio, has come to the following conclusion after reviewing EPA method 200.7 for drinking water and waste water. It is acceptable to preconcentrate samples by evaporation (there is no limit for preconcentration) as long as it does not cause either an uncorrected spectral interference or a matrix suppression affecting signal response or analyte transport to the plasma. An aliquot of the preconcentrated sample(s) should be fortified with the analytes of interest to assure that recovery is between 90% and 110% (See section 5.2.2 of Method 200.7, 40 CFR, APP C) for each matrix type. If the spikes do not meet the acceptance limits, the preconcentration should not be done. Analyte signal suppression has been observed when calcium and magnesium cation total reaches 2000 mg/L.

2. Q. How come EPA 245.1 for Mercury analysis is being withdrawn as of July 1, 1996 but it is also in the approved methods list?

   A. The older versions of EPA 245.1 is being withdrawn (1983 and 1991). The newest version of EPA 245.1 from May 1994, "Methods for the Determination of Metals in Environmental Samples - Supplement 1" is presently approved for the analysis of drinking water and will be proposed for the analysis of wastewater later this year.

3. Q. There is a confusion among laboratories regarding the method to be used for BTEX analysis in soil, BLS-193 or EPA 8020?

   A. To determine the petroleum contamination in samples, the flowchart in the method BLS-191 must be followed. If you arrive at a decision that the BTEX analysis is required to be done, then either BLS-

193 or EPA 8020 can be used. However the appropriate QC should be followed for the selected method and the final report must specify the method used.

4. There appears to be a contradiction in the acceptable limits for Laboratory Fortified Sample Matrix (LFM) recoveries in the EPA method 300.0, Revision 2.1, August 1993, between the sections 9.4.2 and 9.4.3. Our Laboratory Licensure Office will enforce the section 9.4.3 which states that the matrix recoveries that fall within 20% for the Method A and 25% for the Method B will be acceptable. If the LFM recoveries fall outside the designated limits (9.4.3) but the Laboratory Fortified Blank is within 10%, the analysis can continue. The sample result must be flagged to indicate a possible matrix interference (9.4.4). The laboratories can determine their own LFM limits but it must be equal to or tighter than the limits in 9.4.3.

5. 40 CFR, PART 503, STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE requires that the methods specified in the Part 503 regulations be used for the analysis of sludge samples and the final results be reported on a **dry weight basis**. Due to this reporting requirement, in addition to the concentration of the pollutants, the percent solids content of the sludge must also be determined to verify compliance with the pollutant limits. The following formulae can be used to convert the results to "mg/Kg in DRY WEIGHT".

   From mg/L of the digested extract:

   mg/L x Final volume of processed sample in mls

   Weight of the wet sample in gms x percent solids

   = mg/Kg in dry weight

   From mg/Kg of wet sample:

   mg/Kg
   ---------- = mg/Kg in dry weight
   percent solids

6. The Arizona Water Pollution Control Association (AWPCA) has recently established a Laboratory Practices Committee to promote the development of programs and services for environmental laboratory personnel. On Thursday, May 4, 1995 from 1:30 to 3.00 pm, at the AWPCA annual convention, an organizational meeting will be held at Mesa Sheraton Hotel, Room 401. The committee is looking for new members. All the laboratorians are invited to attend. Please call Matt Rexing (602) 644-3291 or Vicki Scott (520) 783-7600 for more information.